

microwave low noise amplifier, and a user VSAT interface. Full electrical power is supplied to the amplifiers in the presence of a communication session. Less-than-full electrical power is supplied to the amplifiers after a predetermined period of inactivity of either the user VSAT interface or the microwave low noise amplifier.

**§ 103(a) Rejections - Soleimani et al. '228 in view of Dent et al. '635**

The Examiner has rejected claims 1-6, 8-12 and 16 under § 103(a) as being unpatentable over Soleimani, U. S. Patent No. 5,678,228 (henceforth, "Soleimani '228") in view of Dent et al., U. S. Patent No. 5,991,635 (henceforth, "Dent et al. '635"). The Examiner's rejection is respectfully traversed.

Soleimani et al. '228 teach a VSAT terminal in which power is supplied to transmitter **10** of outdoor unit **14** only when outdoor unit **14** receives a signal from indoor unit **16**, and in which power is supplied to receiver chain **80** only "at regular predefined intervals" (column 5 lines 4-5). Note that the conditions defined by Soleimani et al. '228 for turning off power to transmitter **10** and to receiver chain **80** are independent of the activities of indoor unit **16** (the equivalent of the user VSAT interface of the present invention) and also are independent of the activities of receiver chain **80**.

According to the present invention, as recited in independent claims 1, 10 and 11, power to the microwave power amplifier and to the microwave low noise amplifier is turned off after a predetermined period of inactivity of the user VSAT interface. Such a condition for turning off the power to the microwave power amplifier and the microwave low noise amplifier is not contemplated by Soleimani et al. '228, and is neither hinted nor suggested by Soleimani et al. '228.

Dent et al. '635 teach a mobile radio-telephone system. As described in column 1 lines 31-58, when a mobile station is in sleep mode, its receiver is "awake" and at full power only during cyclically repeated periods. Dent et al. '635 use two different sleep modes, with the duty cycle of the second sleep mode being longer than the duty cycle of the first sleep mode, so that the mobile station is awake less often in the second sleep mode than in the first sleep mode. One way of entering the second sleep mode is "automatically upon expiration of a time out after a period of inactivity" (column 4 lines 36-37).

The Examiner contends that turning off power to the microwave power amplifier and the microwave low noise amplifier after a predetermined period of inactivity of the user VSAT interface, as in the present invention, can be learned from Dent et al. '635 switching from their first sleep mode to their second sleep mode after a predetermined period of inactivity. Applicant respectfully disagrees. That Dent et al. '635 teach no such thing can be appreciated from the fact that, generally, the mobile station of Dent et al. '635 is already off when they change sleep modes. All that Dent et al. '635 do after a predetermined period of inactivity is change the sleep mode schedule so that their mobile station is awakened less frequently. Dent et al. '635 do not power down their mobile station when they change sleep modes, except in the rare case that the mobile station is awake under the first sleep mode at the end of the predetermined period of inactivity; but then the powering down of the mobile station is a consequence of being in sleep mode, not a consequence of the mobile station having been inactive for a predetermined period. One ordinarily skilled in the art would not be led by a study of Dent et al. '635 to reduce the power supplied to the microwave power amplifier and the microwave low noise amplifier of a VSAT after a predetermined period of inactivity of the user VSAT interface, because Dent et al.

'635 do not use the inactivity of their mobile unit as a criterion for powering down their mobile unit, but only as a criterion for changing the sleep mode of their mobile unit. Thus, independent claims 1, 10 and 11 are patentable in their present form over the combination of Soleimani et al. '228 and Dent et al. '635.

With independent claims 1 and 11 allowable in their present form, it follows that claims 2-6, 8, 9, 12 and 16, that depend therefrom, also are allowable.

**§ 103(a) Rejections - Soleimani et al. '228 in view of Walls '401**

The Examiner has rejected claims 17-19 under § 103(a) as being unpatentable over Soleimani et al. '228 in view of Walls, U. S. Patent No. 5,898,401 (henceforth, "Walls '401"). The Examiner's rejection is respectfully traversed.

According to the present invention, as recited in independent claims 17-19, power to the microwave power amplifier and to the microwave low noise amplifier is turned off after a predetermined period of inactivity of the microwave low noise amplifier. Such a condition for turning off the power to the microwave power amplifier and the microwave low noise amplifier is not contemplated by Soleimani et al. '228, and is neither hinted nor suggested by Soleimani et al. '228.

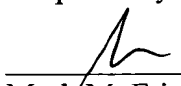
Walls '401 teaches a radar altimeter in which a power amplifier **6** is used to amplify transmitted signals and a low noise amplifier **13** is used to amplify received signals. A power control unit **4** controls the gain of power amplifier **6** to modulate the transmitted power with a pseudo-random rectangular pulse waveform (column 5 lines 1-4). Power control unit **4** also switches off low noise amplifier **13** during the power pulses in order to minimize signal breakthrough from the transmitter to the receiver during the power pulses (column 5 lines 17-20).



The Examiner contends that turning off power to the microwave power amplifier and the microwave low noise amplifier after a predetermined period of inactivity of the microwave low noise amplifier, as in the present invention, can be learned from Walls '401 turning off low noise amplifier 13. Applicant respectfully disagrees. Walls '401 turns off low noise amplifier 13, not in response to inactivity of low noise amplifier 13, but in response to activity of power amplifier 6. One ordinarily skilled in the art would not be led by a study of Walls '401 to reduce the power supplied to the microwave power amplifier and the microwave low noise amplifier of a VSAT after a predetermined period of inactivity of the microwave low noise amplifier, because Walls '401 turn off low noise amplifier 13 in response to the activity of a component of their radar altimeter, not in response to the inactivity of a component of their radar altimeter.. Thus, independent claims 17-19 are patentable in their present form over the combination of Soleimani et al. '228 and Walls '401.

In view of the above amendments and remarks it is respectfully submitted that independent claims 1, 10, 11 and 17-19, and hence dependent claims 2-6, 8, 9, 12 and 16 are in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

  
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MAY 01 2001  
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Date: April 24, 2001